



U.S. Department of Agriculture  
Office of Inspector General  
Financial and IT Operations  
Audit Report

PRIVACY CONSIDERATIONS WITHIN  
USDA AGENCY INTERNET SITES



Report No.  
50099-30-FM  
May 2001



UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF INSPECTOR GENERAL

Washington, D.C. 20250



DATE: May 4, 2001

REPLY TO

ATTN OF: 50099-30-FM

SUBJECT: Privacy Considerations within USDA Agency Internet Sites

TO: Ira L. Hobbs  
Acting Chief Information Officer  
Office of the Chief Information Officer

This report presents the results of our audit of the U.S. Department of Agriculture's (USDA) Internet web site operations to ensure that individuals' privacy are sufficiently protected when they visit individual agency web sites. The Consolidated Appropriations Act of 2001 (P.L. 106-554) requires the Inspectors General to submit a report to Congress disclosing the collection and review of singular or personally identifiable data about individuals accessing any Government web site. While the Office of the Chief Information Officer (OCIO) has actions underway to strengthen the Department's Internet privacy posture, additional measures are needed to ensure continuing compliance with established privacy policies and procedures.

Because of reporting deadlines, we did not request that your office provide written comments to our draft report. However, OCIO officials were provided a draft report for review and they provided verbal comments. These officials agreed with the reported conditions and recommendations. Their comments were considered in finalizing this report.

In accordance with Departmental Regulation 1720-1, please furnish a reply within 60 days describing the corrective actions taken or planned and the timeframes for implementation of the recommendations contained in this report. Please note that the regulation requires management decision to be reached on all findings and recommendations within a maximum of 6 months from report issuance.

We appreciate the courtesies and cooperation extended to us during this audit.

/s/

ROGER C. VIADERO  
Inspector General

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# EXECUTIVE SUMMARY

## PRIVACY CONSIDERATIONS WITHIN USDA AGENCY INTERNET SITES AUDIT REPORT NO. 50099-30-FM

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### RESULTS IN BRIEF

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The Consolidated Appropriations Act of 2001 (P.L. 106-554) requires the Inspectors General to submit a report to Congress disclosing the collection and review of singular or personally identifiable data about individuals accessing any Government website<sup>1</sup>. Accordingly, we conducted this audit of the U.S. Department of Agriculture's (USDA) Internet website operations to ensure that an individual's privacy is sufficiently protected when he/she visits individual USDA agency web sites, and that these agencies are in compliance with Office of Management and Budget's (OMB) policies and procedures on collecting information from and about Internet website visitors.

The Office of the Chief Information Officer (OCIO) has taken the following steps to help ensure an individual's privacy when visiting USDA agency web sites:

- Established the e-government Program within OCIO led by an Associate Chief Information Officer for e-government to provide a focal point for coordinating and facilitating planning and implementation of e-government initiatives within the Department.
- Disseminated departmental policy relating to the use of "persistent cookies" to agency heads, agency information technology leadership, agency webmasters, agency security officers, and agency privacy act officers.
- Advised agency heads and staff offices of a consistent and standardized departmental policy requiring a prominent link on their home page to the departmental privacy policy.
- Maintains frequent contact with the Departmental Webmaster and Agency Webmasters on all matters relating to Internet privacy.

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<sup>1</sup> For the purpose of this report, the term web site and web page are interchangeable. A web site normally consists of a home web page and may have additional web pages and associated data files. Since each web page has its own Uniform Resource Locator, it might also be considered to be a web site.

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While these actions are substantial and contribute to ensuring compliance with established privacy policies, we believe additional measures must be taken to further strengthen the Department's Internet privacy posture. For example, we found the Department had not compiled an inventory of web sites and there is no requirement that a comprehensive Department-wide inventory be maintained. We also found that USDA agencies employ various software tools for the creation and maintenance of their individual web sites. The Department has advised us that they plan to develop a departmental inventory of web sites.

To test compliance with established privacy policies, we conducted a review of 13 selected USDA agencies' Internet web sites/pages and evaluated a total of 10,067 USDA agency web pages. We only identified two instances where "persistent cookies" were used. In both instances, agency officials advised us they were aware of policies prohibiting the use of "persistent cookies" and were unaware that their web pages were using them. These officials advised us that immediate action would be taken to eliminate the use of them and we confirmed that appropriate action had been taken. From our review results, we noted no instances where "persistent cookies" were used to create any list containing personal information about individuals visiting USDA web sites/pages.

Additionally, we reviewed a total of 69 agency web home sites or other sites considered to be major entry points to USDA web sites, to determine if users are provided reference and/or linkage to the departmental privacy policy as required by established policies. We found that 17 web sites did not provide the required information. Whenever we noted a site without the required privacy statement, we contacted agency officials and in each instance, they agreed to update their sites identified to provide the required privacy statements.

We also determined that the Department had taken sufficient action to correct conditions reported in a recent General Accounting Office report which found two USDA agency web sites using "persistent cookies."

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## KEY RECOMMENDATIONS

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We recommend that OCIO:

- Require agencies to provide an inventory of their web sites and report changes in their inventories or web pages as they occur.
- Establish a standardized set of software tools for the creation and maintenance of USDA Internet web sites.
- Assess agency compliance with Governmental and Departmental privacy policies relating to web sites.
- Require agencies to periodically review and test their web sites/pages for compliance with established Internet privacy policies and submit annual certifications to the OCIO that these requirements are being met.

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## AGENCY RESPONSE

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recommendations in this report.

We did not request written comments to this report from OCIO officials. OCIO officials did provide verbal comments at the exit conference. The OCIO officials agreed with the findings and

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## OIG POSITION

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We agree with the OCIO's contemplated actions. However, we will need additional information to enable us to reach management decision for the recommendations.

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# INTRODUCTION

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## BACKGROUND

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Information security, improving the overall management of information technology (IT) resources, and the transition to electronic business (e-government), are a top priority with the U.S. Department of Agriculture (USDA). The USDA is rapidly entering the electronic-business (e-government) era. Current technologies allow for the sharing of information among the government and the public. Web sites are powerful tools used to access information about the Government. However, the web site's full potential will not be realized until the public is confident that their privacy is protected. Concerns are raised when web technology such as "cookies" or other automatic means of collecting information are used to track users over time and across different web sites without proper disclosure.

One of the principal technologies used to collect information from and about web site visitors is the "cookie". The term "cookie" has been used in the IT field for sometime<sup>2</sup>. For the Internet, it represents a mechanism used on web sites to collect information by placing small bits of software on web user's computers. There are two types of "cookies" – "persistent cookies" and "session cookies." "Persistent cookies" track information over time or across web sites. They remain stored on visitor computers until the specified expiration date and can be used to collect individual browsing information, such as the visitor's area of interest. "Session cookies" are used only during a single browsing session and do not collect information in ways that raise privacy concerns.

Both the Office of Management and Budget (OMB) and USDA have issued policies addressing privacy and data collection on Federal web sites. OMB issuances include Memorandum M99-18, "Privacy Policies on Federal Web Sites and Memorandum M00-13, "Privacy Policies and Data Collection on Federal Web Sites." The use of "session cookies" is exempted from OMB requirements. USDA departmental policies are contained in various Office of the Chief Information Officer (OCIO) policy letters.

These policies generally require that:

- Each agency is required to establish clear privacy policies for its web activities and to comply with those policies.

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<sup>2</sup> In the computer science field, a "cookie" is used to describe an opaque piece of data held by an intermediary.

- Agencies are to post clear privacy policies on agency principal web sites, as well as at any other known, major entry points to sites, and at any web page where substantial amounts of personal information are posted.
- Under these policies, “cookies” or other automatic means of collecting personal information to track users over time and across different web sites should not be used at Federal web sites, or by contractors when operating web sites on behalf of agencies. (Unless, in addition to clear and conspicuous notice, the following conditions are met, a compelling need to gather the data on the site; appropriate and publicly disclosed privacy safeguards for handling of information derived from “cookies”; a personal approval by the head of the department.)

The Chief Information Officer (CIO) is the Department official responsible for supervision and coordination within the Department of the design, acquisition, maintenance, use and disposal of information technology by USDA agencies. In addition, it is responsible for monitoring the performance of USDA’s IT programs and activities, and for assuring that USDA information management is consistent with the principles of the Paperwork Reduction Act and with information security and privacy requirements. The Office of Communications administers USDA’s home page on the Internet World Wide Web and provides departmental coordination of responses under the Freedom of Information Act.

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## **OBJECTIVES**

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The objectives of this audit were to (1) determine whether the OCIO had established policies and procedures regarding privacy and data collection involving USDA agency Internet web sites; (2) evaluate selected USDA agencies’ compliance with these established Internet privacy policies and procedures; (3) determine whether applicable privacy safeguards and/or public notifications are in place and functioning as intended; (4) determine whether USDA agencies have created any list about individuals who have accessed any Departmental or individual agency Internet web sites; and (5) determine whether the Department has taken sufficient corrective actions to address conditions reported in a recent General Accounting Office (GAO) report<sup>3</sup> relating to Internet privacy.

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## **SCOPE**

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Since the Department did not have an inventory of web sites, we judgmentally selected 13 USDA agencies for review. These agencies were selected based on the likelihood of their

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<sup>3</sup> Report No. GAO-01-147R “Federal Agency Use of Cookies,” dated October 20, 2000.

sites being accessed by the public (e.g. Farm Service Center agencies) and in one case, at the request of the OCIO. We then judgmentally selected 10,067 web pages for testing. We limited our review to identifying the use of “persistent cookies” since the use of “session cookies” is exempted from OMB requirements. We performed our tests during March and April 2001.

We conducted this audit in accordance with Government Auditing Standards.

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## **METHODOLOGY**

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To accomplish our audit objectives, we performed the following procedures:

- We reviewed IT privacy policies from OMB, the OCIO, and individual agencies where warranted.
- We performed detailed testing of selected agencies’ web sites using a feature offered by the software vendor browsers to identify the use of “cookies” on the web sites/ pages visited.
- We interviewed responsible agency officials and web site managers where “persistent cookies” were found and ascertained whether personal information was collected, whether the need for the information was appropriate and whether any USDA agencies had created lists about users accessing their Internet sites.

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## FINDINGS AND RECOMMENDATIONS

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<b>CHAPTER 1</b>	<b>USDA DOES NOT MAINTAIN AN INVENTORY OF WEB SITES</b>
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### FINDING NO. 1

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The Department needs to establish a complete inventory of publicly accessible web sites to help ensure its compliance with existing Federal requirements relating to user privacy. Our audit revealed that the Department's ability to report compliance with existing federally mandated privacy guidelines<sup>4</sup> and to complete other appropriate oversight activities relating to e-government, is adversely impacted due to the lack of a means to readily identify and locate individual sites and/or pages.

The Department has strengthened its e-government program by appointing an Associate CIO for e-government. Additionally, it has disseminated policy relating to the use of "persistent cookies" to agency heads, information technology leadership, webmasters, security and privacy act officers; advised agency heads and staff offices of a consistent and standardized departmental policy requiring a prominent link on their home page to the departmental privacy policy; and have established and maintained frequent contact with the departmental and agency webmasters on all matters relating to Internet privacy. The CIO is the department official responsible for supervision and coordination within the Department for the design, acquisition, maintenance use, and disposal of IT by USDA agencies, for monitoring the performance of USDA's IT programs and activities, and for assuring that USDA information management is consistent with the principles of the Paperwork Reduction Act and with information security and privacy requirements. The OCIO's ability to accomplish its mission may be jeopardized if it cannot determine the current size and structure of the e-government Internet web environment within the USDA.

While no formal government wide criteria have been established to require the creation and maintenance of web site inventories by Federal agencies, OCIO managers have recently recognized the need for such an inventory and have begun drafting a statement of work to obtain contractor assistance in

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<sup>4</sup> OMB Memorandum M-00-13, "Privacy Policies and Data Collection on Federal Web Sites," requires that a description of privacy practices and the steps to be taken to ensure compliance with the memorandum be included in the IT segment of the Department's budget submission.

the development of an e-government framework, which will include an assessment of the current state of electronic business across the Department and the development of an inventory of USDA agencies' web sites.

During our review, we were unsuccessful in our attempts to compile an inventory of web sites/pages in use by USDA. USDA agencies have used numerous different web server software development tools to develop and maintain their web sites/pages. A comprehensive inventory of USDA web sites/pages is needed to enable the OCIO to effectively assess the Department's compliance with Federal privacy policies.

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**RECOMMENDATION NO. 1**

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Require agencies to provide an inventory of their web sites and report changes in their inventories or web pages as they occur.

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**RECOMMENDATION NO. 2**

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Conduct evaluations at periodic intervals to assess individual agency compliance with Federal and departmental privacy policies.

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**RECOMMENDATION NO. 3**

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Establish a standardized set of software tools for creating and maintaining Internet web sites/pages.

## CHAPTER 2

## "PERSISTENT COOKIES" SELDOM USED ON INTERNET WEB SITES

### FINDING NO. 2

Although USDA agencies have taken little action to ensure that their web site/pages did not employ the use of "persistent cookies", our review of USDA agency web sites disclosed

that the use of these "cookies" is not a significant problem at this time. We found only two instances out of 10,067 web pages reviewed where "persistent cookies" were being used and proper waivers had not been requested or granted. The USDA agencies contacted were aware of policies prohibiting the use of these "cookies" without a written waiver; however, they had not taken steps to ensure their web sites/pages did not use "persistent cookies" for any purpose. The absence of controls has resulted in the Department's privacy policies not being always followed and public confidence in using USDA's IT resources may be compromised.

OMB, Memorandum for Heads of Executive Departments and Agencies, M-00-13, dated June 22, 2000, states: "Under this new Federal policy, "cookies" should not be used at Federal web sites, or by contractors when operating web sites on behalf of agencies, unless, in addition to clear and conspicuous notice, the following conditions are met: a compelling need to gather the data on the site; appropriate and publicly disclosed privacy safeguards for handling of information derived from "cookies"; and personal approval by the head of the agency."

We conducted a review of selected USDA agencies' web sites/pages during March and April 2001. Our review included 10,067 web pages for 13 USDA agencies (see Exhibit A). Additionally, we reviewed the specific USDA web site conditions reported in the GAO report entitled, "Internet Privacy: Federal Agency Use of Cookies," dated October 20, 2000. In the report, the GAO found that two USDA agency web sites/pages were using "persistent cookies."

We found two agency web sites/pages where "persistent cookies" were being used and reported this information to the responsible agency webmasters. We also found that appropriate corrective action had been taken for the two USDA agency web sites cited in the GAO report.

Agency webmasters advised us they were unaware of the existence of the "persistent cookies." The agency personnel apprised us they were aware of departmental privacy policies, agreed that such use was inappropriate, and

took immediate action to eliminate the use of the cited “cookies.” We determined that in neither case was the “persistent cookie” designed to collect personally identifiable information from web visitors. However, these instances demonstrate that protecting web privacy is an ongoing challenge because web sites are constantly revised and reconfigured.

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#### **RECOMMENDATION NO. 4**

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Internet web sites/pages  
policies.

Require USDA agencies to periodically review their web sites/pages and test compliance with established Internet privacy policies and submit annual certifications to the OCIO that their comply with OMB and departmental privacy

## CHAPTER 3

### PRIVACY STATEMENTS ARE NOT PROVIDED ON AGENCY WEB HOME PAGES OR OTHER MAJOR POINTS OF ACCESS TO USDA WEB SITES

#### FINDING NO. 3

Some USDA agency web sites tested did not have privacy policies posted or referenced on their web sites/pages. This occurred because responsible agency officials had not taken

adequate actions to insure compliance with established policies. We found 17 agency web home pages or other major web access points where privacy policies were not posted in accordance with existing Federal and departmental privacy policies. As a result, public confidence that their privacy will be protected is reduced and the opportunity to share information between the government and the public may be lost.

OMB, Memorandum for Heads of Executive Departments and Agencies, M-00-13, dated June 22, 2000 states in part: "Agencies are to post clear privacy policies on agency principle web sites, as well as at any other known, major entry points to sites, and at any web page where substantial amounts of personal information are posted. Privacy policies must be clearly labeled and easily accessed when someone visits a web site."

We conducted a review of 69 agency web home pages and other known major web sites available from the USDA Internet home page. We found that 52 of the sites reviewed have properly posted, and made available to the user, the USDA privacy policy statement. However, the remaining 17 web sites provided no reference or link to a privacy statement. The responsible webmaster for each of the web sites without the required statement was contacted. In all instances, these webmasters agreed to make the necessary modifications to bring their web site/pages into compliance with existing policy. However, we noted instances where these agency personnel expressed to us that they were not sure which of their web sites required the privacy policy statements and that they had not conducted any reviews of their web sites to ensure privacy policy statements were in place and functioning as intended.

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**RECOMMENDATION NO. 5**

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Provide guidance and direction to USDA agencies clarifying which web sites require posting of and/or linkage to the required privacy policy statements and require these agencies to periodically conduct reviews of their web sites/pages to verify compliance with departmental requirements.

## EXHIBIT A – SUMMARY OF USDA WEB PAGES REVIEWED

AGENCY/OFFICE	NUMBER OF WEB PAGES VISITED	NUMBER OF PERSISTENT COOKIES FOUND
AMS	1,190	0
APHIS	2,041	0
ARS	507	0
CIVIL RIGHTS	66	0
FNS	861	0
FS	991	1
FSA	488	0
NASS	775	0
NFC	324	0
NRCS	1,572	0
OFC. OF EXEC. SEC.	8	0
RD	315	0
RMA	929	1*
TOTAL	10,067	2

- The cookie found during a review of Risk Management Agency web pages was from a link to an USDA Graduate School web page ([WWW.GRAD.USDA.GOV](http://WWW.GRAD.USDA.GOV))

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## ABBREVIATIONS

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AMS	Agricultural Marketing Service
APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
CIO	Chief Information Officer
CIVIL RIGHTS	Office of Civil Rights
FNS	Food and Nutrition Service
FS	Forest Service
FSA	Farm Service Agency
GAO	General Accounting Office
IT	Information Technology
NASS	National Agricultural Statistics Service
NFC	National Finance Center
NRCS	National Resources Conservation Service
OCIO	Office of the Chief Information Officer
OFC. OF EXEC. SEC.	Office of Executive Secretariat
OMB	Office of Management and Budget
RD	Rural Development
RMA	Risk Management Agency
USDA	U.S. Department of Agriculture